

On this page: The Portrait of Avram Iancu, Portrait of a Woman, The Portrait of Adam Ballint (top), The Portrait of Simion Ballint (fragment), Old Street in Craiova (left), Figures of Serbian Revolutionaries (right), The Portrait of Petre Dobra, Lyon (the Barbu Iscovescu Island) (bottom).

I. DANCIU ■

Barbu Iscovescu was born in Bucharest in 1816 and died at Brusna (Turkey) in exile, in 1853. He was one of three revolutionary painters who inaugurated the progressive tradition in Romanian painting, expressing their people's thoughts, feelings and aspirations.

The activity of the three revolutionary painters, Ion Negulici, C. Rosenthal and Barbu Iscovescu was dominated by a strong romantic feeling, by genuine revolutionary painters. They took an active part in the 1848 Revolution and sacrificed their lives to the cause of the revolution.

After his studies abroad, especially in Vienna, from 1830 to 1837, Iscovescu returned to Bucharest to join the ranks of the revolutionary painters. After the repression of the revolutionary movement, he was exiled.

Take his refuge in Transylvania, he painted the portraits of the revolutionary fighters with Avram Iancu at their head and later the portraits of Serbian revolutionaries. Finally he arrived in Paris where he made replicas of the engravings representing the Romanian princes found by Nicolae Balcescu at the Bibliothèque Nationale.

After the coup d'état of Napoleon III, Iscovescu left Paris and took refuge at Brusna where he died at the age of 38.

Iscovescu was the first Romanian stage designer and one of the first landscape painters in our country. As a portraitist he did not choose his models from among the rich, but painted figures of revolutionary leaders, in his attempt to popularize their personalities.

I. DANCIU ■

INFORMATION AND COMMENTARY WEEKLY PUBLISHED BY THE ROMANIAN NEWS AGENCY, BUCHAREST

ROMANIAN  
NEWS

INFORMATION AND  
COMMENTARY WEEKLY  
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NEWS, MOVIES,  
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TRADE-  
COOPERATION-  
DEVELOPMENT-  
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INFORMATION AND  
COMMENTARY WEEKLY  
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RAILWAY  
TRANSPORT  
(PAGES 8-9-10)

# ROMANIAN NEWS

INFORMATION AND COMMENTARY WEEKLY PUBLISHED BY THE ROMANIAN NEWS AGENCY, BUCHAREST

## NICOLAE CEAUŞESCU AND ELENA CEAUŞESCU PAID OFFICIAL FRIENDLY VISITS TO THE PR OF CHINA AND THE DPR OF KOREA

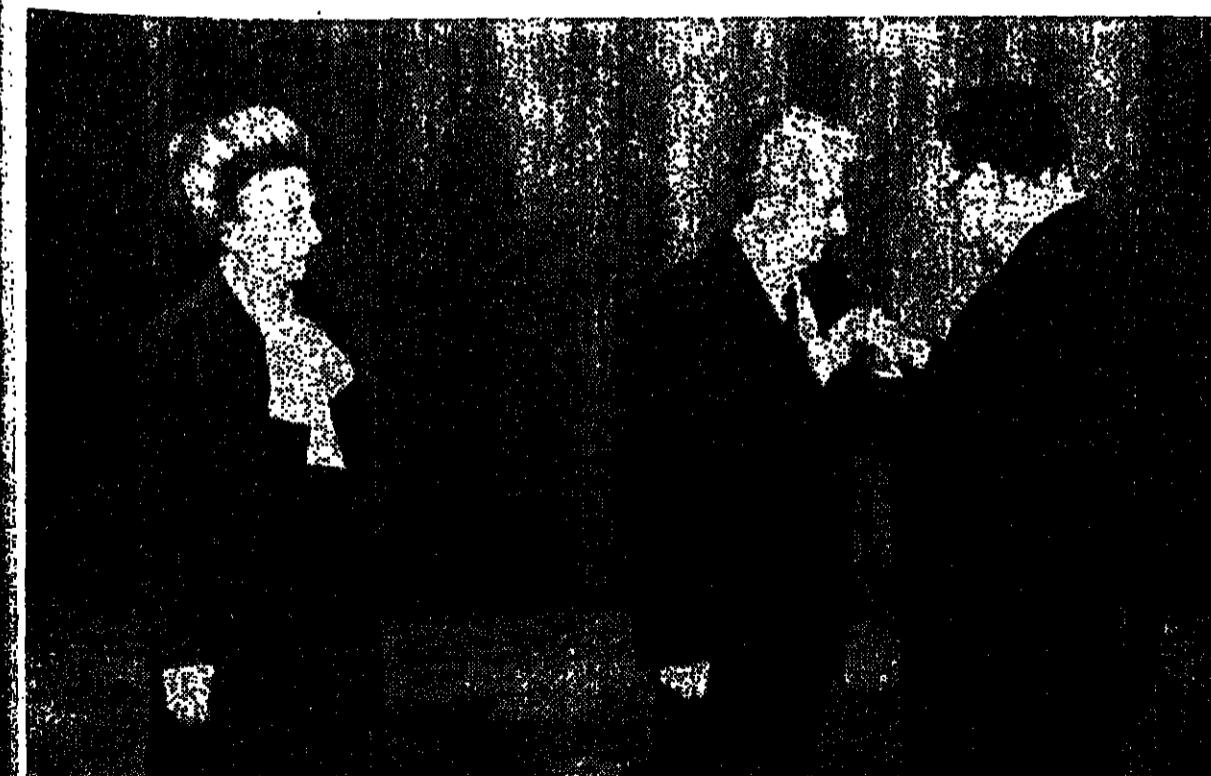
Nicolae Ceauşescu, General Secretary of the Romanian Communist Party, President of the Socialist Republic of Romania, and Elena Ceauşescu paid an official friendly visit to the People's Republic of China over October 14-18, 1988 at the invitation of Zhao Ziyang, General Secretary of the Central Committee of the Chinese Communist Party, and of Yang Shangkun, President of the People's Republic of China.

The distinguished Romanian guests enjoyed a warm reception mirroring the feelings of friendship and esteem tying the Romanian and Chinese peoples.

During the visit, Nicolae Ceauşescu, General Secretary of the Romanian Communist Party, President of the Socialist Republic of Romania, and Elena Ceauşescu had official meetings and talks with Zhao Ziyang, General Secretary of the Central Committee of the Chinese Communist Party, Yang Shangkun, President of the People's Republic of China, Li Peng, Premier of the State Council of the People's Republic of China.

Nicolae Ceauşescu and Elena Ceauşescu had separate and complementary friendly talks with Deng Xiaoping, Chairman of the Central Committee of the Chinese Communist Party's Central Committee, and with Li Xianian, Chairman of the National Committee of the Chinese People's Political Consultative Conference. The talks, the atmosphere of which was cordial and friendly, of mutual respect and understanding, ove-

(cont. on p. 3)



Over October 18-21, Nicolae Ceauşescu, General Secretary of the Romanian Communist Party, President of the Socialist Republic of Romania, together with Elena Ceauşescu paid an official visit of friendship to the Democratic People's Republic of Korea, at the invitation of Kim Il Sung, General Secretary of the Central Committee of the Workers Party of Korea, President of the Republic.

The visit proceeded in an atmosphere of warm friendship, mutual esteem and understanding, characteristic of the traditional relations between the two countries.

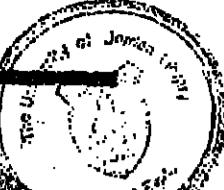
A moment of great importance in the rich history of the Romanian-Korean relations, the visit — the fifth — paid by President Nicolae Ceauşescu to the DPR of Korea highlights the upward course of the traditional links of friendship, militant solidarity and collaboration established between the two socialist countries, as well as the mission assigned to expand and strengthen further those relations, to the benefit of both peoples, of the cause of peace and understanding among nations.

In fact, as they did in their first meeting, the two party and state leaders expressed their satisfaction at the new meeting, at the opportunity to continue the Romanian-Korean mutual dialogue and express their common will to work for the further development of the traditional relations between the two countries, in the interest of the world's peace and the strengthening of their collaboration in the world arena, to mutual benefit in the interests of the general cause of socialism and peace in the world.

(cont. on p. 3)

INFORMATION AND COMMENTARY WEEKLY  
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AGENCY

RAILWAY  
TRANSPORT  
(PAGES 8-9-10)









AN EXPRESSION OF THE ECONOMIC POTENTIAL  
AND TECHNOLOGICAL LEVEL

## RAILWAY TRANSPORT

- THE MAIN FORM OF GOODS AND PASSENGER TRANSPORTATION • A RAILWAY MAP WHICH STARTED TO BE DRAWN MORE THAN A CENTURY AGO • TWO DECADES OF STEADY DEVELOPMENT OF THE ROMANIAN RAILWAYS • FROM LICENSES TO ORIGINAL SOLUTIONS • RAILWAY PROJECTS ACHIEVED WITH STATE-OF-THE-ART BUILDING EQUIPMENT AND TECHNOLOGIES • THE IMPACT OF HIGH TECHNOLOGY • FROM THE STEAM LOCOMOTIVE TO UNCONVENTIONAL TRANSPORT SYSTEMS • ROMANIAN RAILWAY CARS ON ALL CONTINENTS

In Videle locality, a locomotive could be seen the other day rolling on the railway without a driver. No, it was no optical illusion. The locomotive was a Diesel one, controlled remotely from the tower of the Videle marshalling yard. This was the first marshalling yard in the Romanian railway network to be automated. The equipment and computer technology were entirely made in this country. But the "Videle cybernetic island", as the railway workers call it, is not an isolated island of state-of-the-art technology. Work is in progress now on the equipment of the Bucharest-Constanța railway (250 km) with automatic train control installations. The prototype has been executed and homologated for the remote control of electric locomotives from automated marshalling yards. One has also achieved and homologated a system of direct connection between the traffic dispatch office

and the locomotive driving personnel through the introduction of selective radio communications with the trains in motion. Scientific research, technological novelty and the introduction of technical progress have acquired special significances and proportions in the area of Romanian railway transport.

### DOSSIER



## TRAINS BOUND FOR THE FUTURE

Romania's railway transport after the destruction caused by the Second World War was altogether precarious. As many as 38 per cent of the railways were closed, while the remainder allowed of extremely slow traffic. The car and locomotive park had sustained tremendous damage, and the "surviving" stock was outdated. Railway transport has become insufficient, uneconomical and unsafe.

From the first postwar years, Romania's economic policy was oriented towards the fast expansion and modernization of the railway network. The progression of the Romanian productive forces in the Romanian economic equation was not possible outside an accurate graph indicating the evolution of the rolling stock transport.

Naturally, with great financial efforts but also with a substantial combustion of professional competence, the Romanian railway establishment (CFR) perfected itself from an organiza-

tional, technical and technological point of view.

Particularly in the last two decades steady efforts have been made to increase traffic capacities and improve traffic conditions on all the country's railways. Constructional solutions and execution methods have been updated. The mechanization and automation of works have been extended. Works that were not only costly but also of great technical difficulty have resulted in the growth of railway transport facilities and of their capacity. Marshalling operations have been mechanized and automated. The locomotive and car park has been completed and the units for the maintenance and repair of the rolling stock expanded.

Compared to 1911, the length of the railways over Romania's territory has increased by 33 per cent, but two-track lines have multiplied 5.7 times, accounting at present for 35 per cent of the length of the main



line network.

In just two decades which have elapsed since the official opening of the first electrified line in the country's railway network — that between Bucharest and Brașov, which was 170 km long — the length of the electrified lines has come to account for 70 per cent of the total length of the main line network.

Chemical enterprises of work-

ers, such as polistyrene and fireman, have been wiped out of

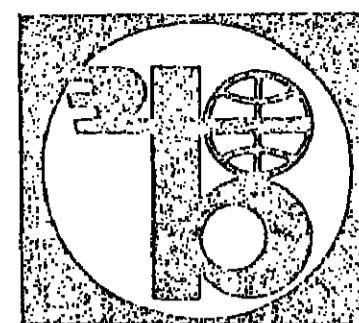
### A MAP ON THE MOVE

A special stamp was specially issued in 1887 for mailing the Constanța-Cernavoda route. It was the first European stamp having a railway theme. It shows a train entering Constanța port. But the Constanța-Cernavoda railway is only the second railway in Romania.

Before entering the country of today, Romania's railway network with numerous applications of a financial, technical, organi-

# ROMANIAN NEWS

TECHNICAL AND COMMERCIAL INFORMATION FOR BUSINESS

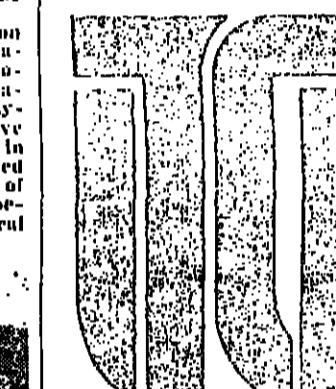


## THE INSTITUTE FOR COMPUTERS AND INFORMATICS

The Institute for Computers and Informatics (ITCI) is mainly concerned with carrying out scientific research and technical development in the field of computing, equipment manufacturing and informatics, the small-scale production of computer technology, the design and setting up of turnkey computer systems, the organization, development and coordination of the software industry on a national level. As a consequence of this, the activity in the field of informatics has been organized in a systematic way. ITCI provides technical assistance for all the above-mentioned categories of activities, helping end users gradually pass from the data processing to the new computer-based information methods.

The long-term cooperation with computer technology manufacturers and enterprises in Romania as concerns the installation of computers, operating systems, basic and applicative software for the end-users in this country and abroad has led to the formation of a body of specialists with a wide experience in providing technical assistance.

At the same time the scientific cooperation with similar institutes in other countries has continued. In the topology of the world, ITCI is the only institute in this field which is permanently developing and making progress. As a natural consequence, ITCI is in charge of some problems and themes



within the Complex Programme for technical-scientific cooperation of the CMEA member states.

Being involved in applications in fields of economic and social activity, ITCI has acquired a vast theoretical and practical experience, raising its data processing personnel to the level of the professional competitiveness required by the large scale utilization of informatics.

The organization of ITCI is NExible in relation with the requirements of the national economy, with the dynamic evolution of computer technology and informatics. The institute is organized on research departments and laboratories, production departments and workshops, technical assistance departments. They carry out the following activities:

• research elaboration and development of basic programs (operating systems, programming languages, processors and other utility programs) for all categories of computer technology produced in Romania;

• training and refresher

courses for data processing

units using equipment manufac-

tured in Romania, including

courses in widely circulated

languages for the benefit of

foreign partners;

• research and elaboration

of systems used in the

control of production and

technological processes in the

field of electronics, computers

technology and informatics (ma-

chines building, chemistry,

metallurgy, civil and industrial

constructions, light industry,

transport etc.);

• consulting services and

technical assistance for

all problems in the field

of computer technology and in-

formatics;

• data processing, in their

own computing centers

for end-users who do not

have their disposal equipment

for automated data processing;

• on the basis of equipment

produced by ITCI, the

Enterprise of Electronic Com-

puter and Peripheral Equipment

in Bucharest, the Factory of

Microcircuits and Components

for Computer Technology in Timișoara and the departments

of ITCI have

been assigned to develop

and produce

industrial and consumer

computer equipment and

peripheral equipment and

special equipment based on data

processing;

• R&D activity, research

and development of

information systems

in Bucharest;

book on p. 11



## ITCI — A MANUFACTURER OF COMPUTER TECHNOLOGY AND COMPONENTS

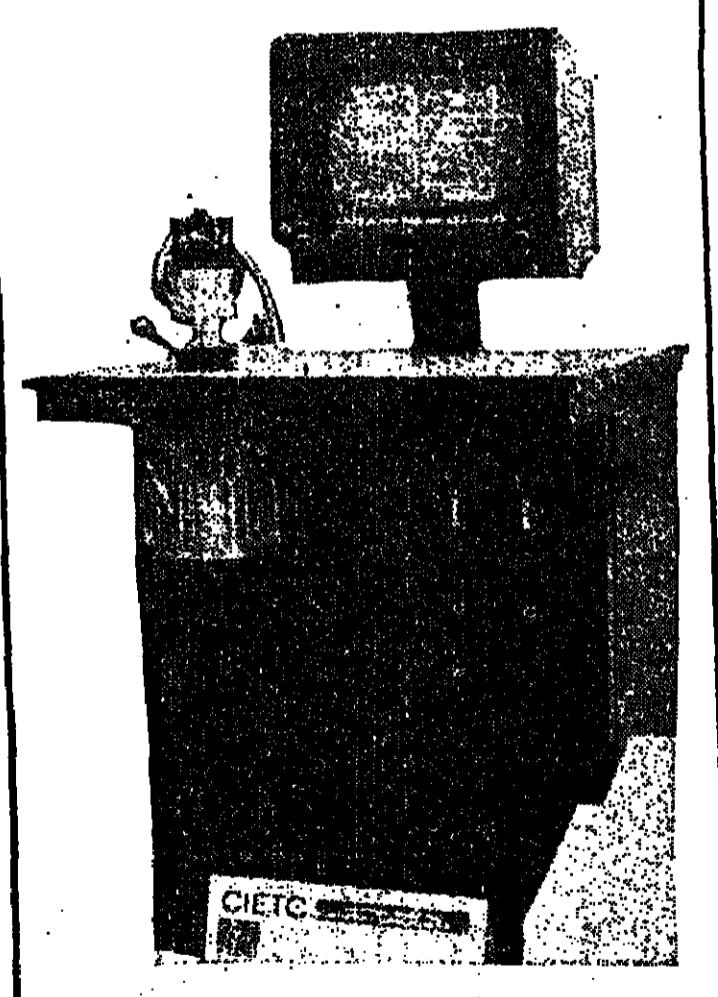
By turning to account the advanced technologies and projects resulting from the scientific research activity carried out in its laboratories, ITCI manufactures computer technology and components in its units of industrial microproduction and production:

• minicomputers for applications in aggressive industrial

• control modules for peripheral devices and industrial processes;

- unitary carrying constructions for various types of computers;
- high reliability equipment;
- 16 bit minicomputers in ATR enclosures, digital processing equipment for process control in nuclear-electrical plants, mini-

• minicomputers for applications in aggressive industrial



environments:

- integrated circuit memory modules; memory printed and memory units for computers and minicomputers, mass memory and modules with characteristics specified by end-users;

• IBM-PC and SPECTRUM compatible personal computers, microcomputers using INTEL 8080/8085, Zilog 286/2860 microprocessors;

• graphic consoles for users in industrial environments that are VT 220 and VT 82 compatible;

• modular current sources; a complete portfolio of 25 source types for current output topologies (0...100 VDC) at powers of 5.25 and 50 W;

• electronic assemblies; con-



## ITCI — A VANGUARD ECHELON OF ROMANIAN RESEARCH AND TECHNOLOGICAL ENGINEERING

The strategy promoted by ITCI in scientific research and technological engineering ensures one's keeping abreast of development in all fields that are decisive for the progress of computer technology and information.

The work in the field of computer equipment research work is being carried out in:

- new architectures and structures based on microprocessors, meant for future computer generations; DEU compatible minicomputers, advanced systems of information graphic processing, IBM compatible microcomputers, INTEL/Zilog compatible microcomputers;
- systems of image electronic synthesis;
- new types of peripheral equipment for computers, minicomputers and microcomputers (external memory units, printers, digitizers, etc.);
- equipment designed for the control of technological processes for STEEL, NUC, and BIT BUS computer networks;
- new types of specialized

processors for controlling various machine tools, for assisting aircraft navigation, for dispatching installations, etc.;

The research on the working out of basic programs and system utilities for the computing equipment and information systems is mainly carried out with a view to achieving the following types of programs:

- RSX compatible operating systems (MIX system), UNIX compatible systems (U system), real time monitor;
- translators for FORTRAN, COBOL, BASIC, PASCAL, C, MODULA-2, ADA, LISP, PROLOG, SMALLTALK, programming languages, etc.;
- translators for application-oriented languages (general-purpose simulation languages, simulation languages for Petri networks systems, description and control languages for applicative information systems);
- utility programs for all types of computers;
- management systems for all types of computers;
- management systems for telecommunications.

and instruments of program engineering;

- computer-aided instructional systems;

- information systems in hospital management, for health care expert systems for medical diagnosis, program systems for technical medical equipment filled with microprograms.

The computer programs worked out in the information units of Romania, which meet the functional and quality requirements of large sectors of users, are being organized and brought to the level required by Romanian and international standards, through the National Program Library, a computer system which provides all software industry services to its end users.

### FOR ANY FURTHER INFORMATION, PLEASE CONTACT: PRODUCERS:

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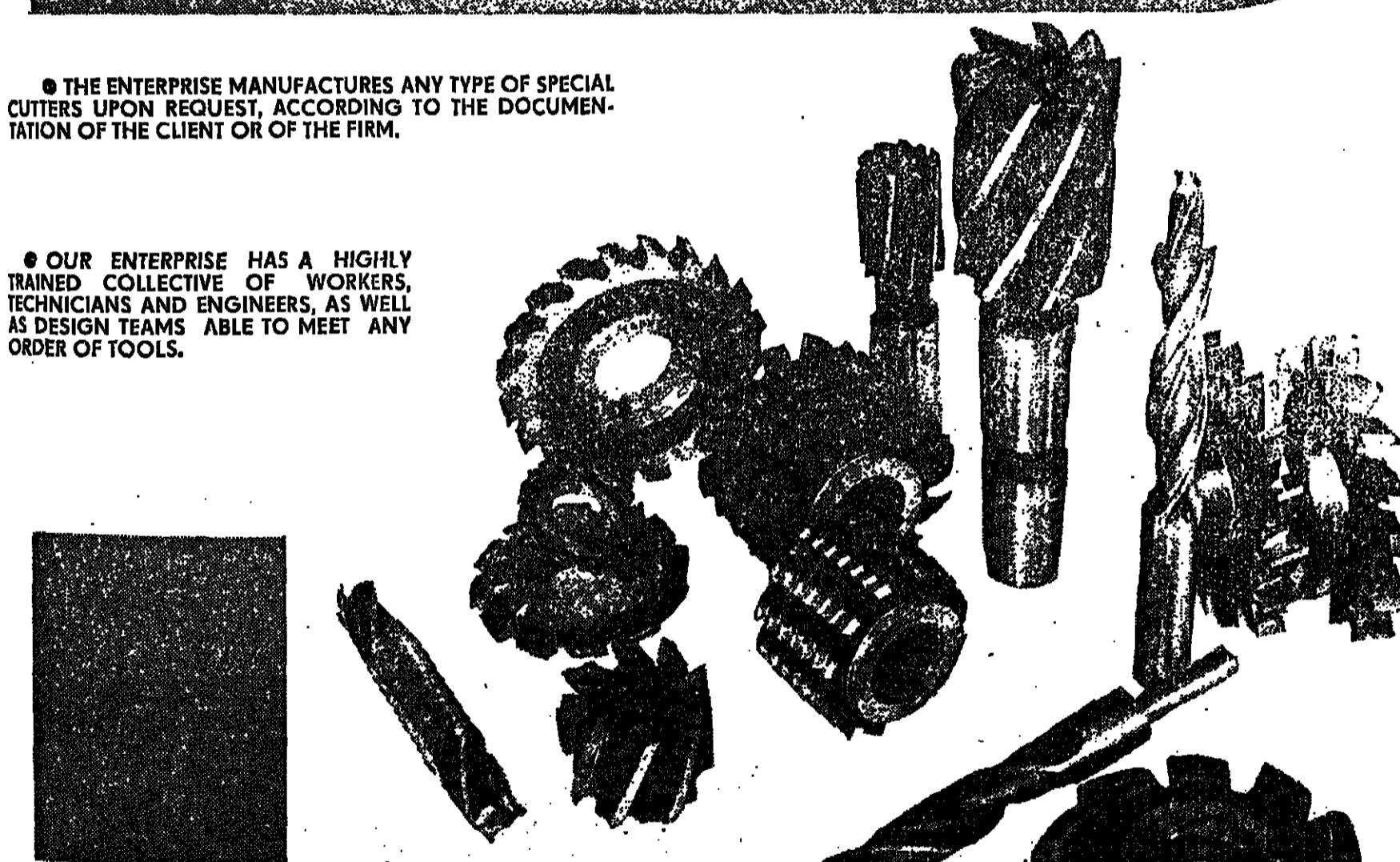
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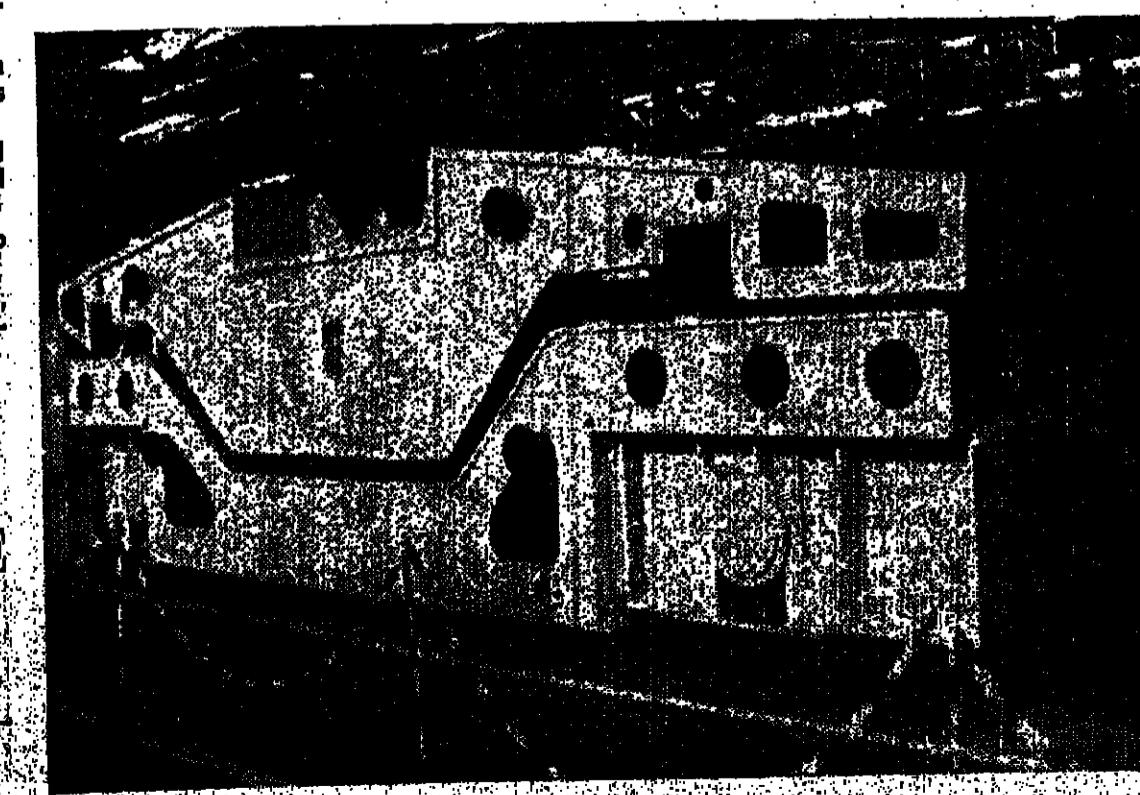
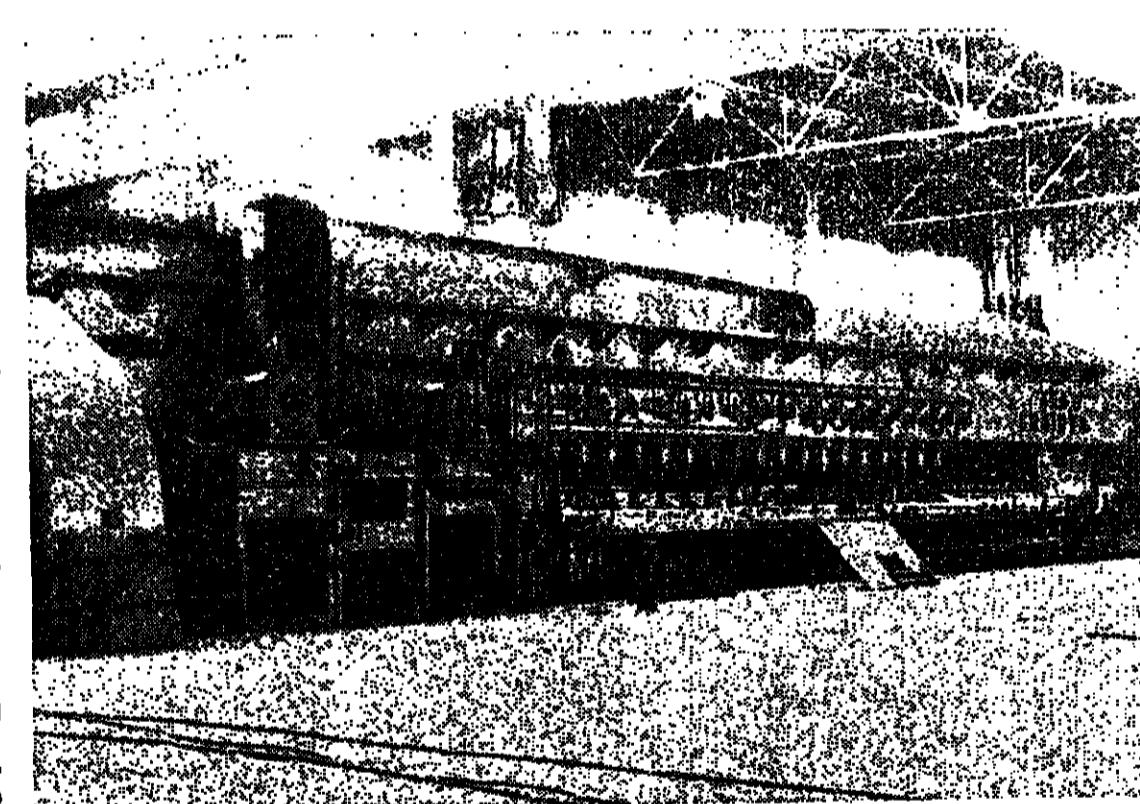
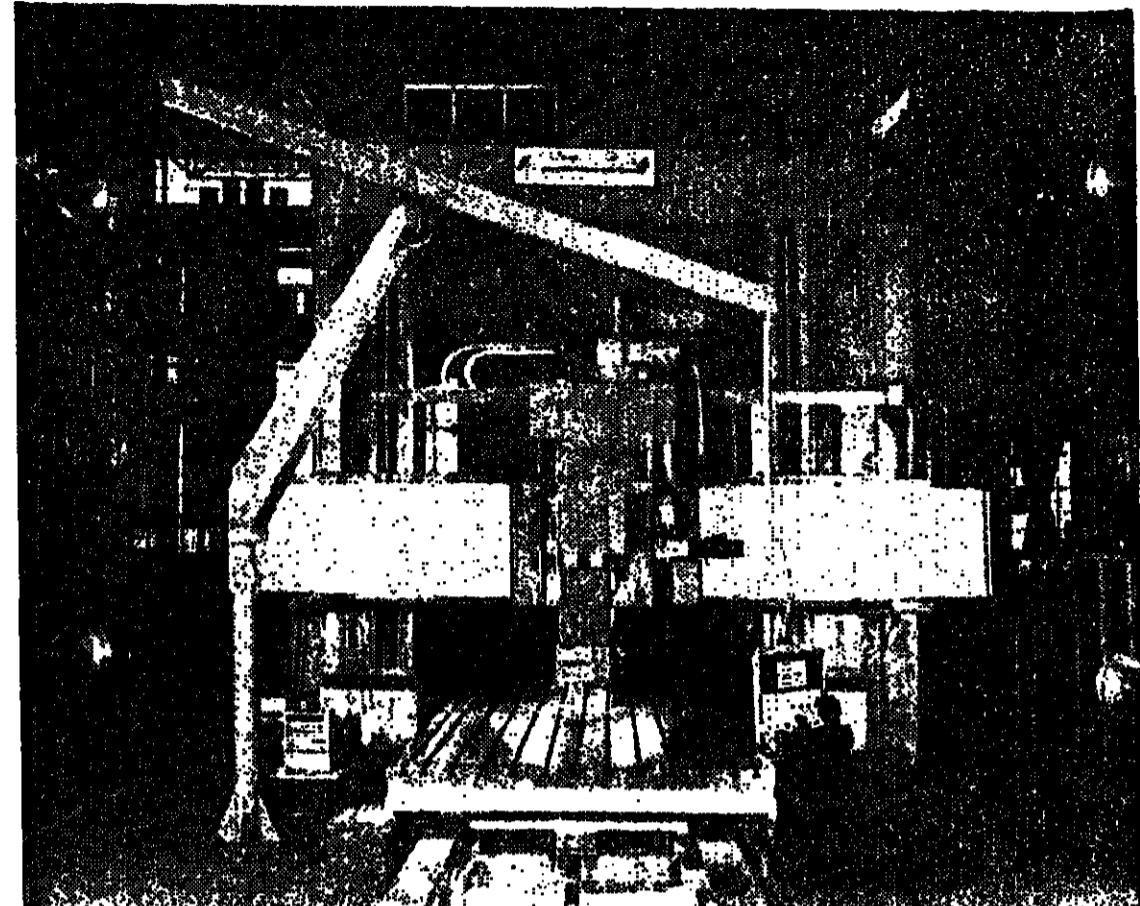
- PHM 2000, PHR 2000 singlestoreyed hydraulic press
- PHM 400 singlestoreyed hydraulic press
- PH 6B six-storeyed hydraulic press
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- FPO 1200 horizontal band saw
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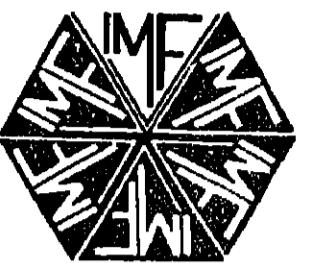
- complex technological equipment for the iron and steel industry
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  - spur gear or screw wheels with diameter ranging between 30 and 600 mm 1-30 modules (with generating milling cutters) and width to 2,000 mm
  - straight bevel gear,  $d = 35 - 500$  mm,  $m = 1.5 - 12$  mm, and  $B_{max} = 72$  mm, pitch cone length up to 200 mm
  - dridding spur gear or screw wheels,  $d = 25 - 1,000$  mm,  $m = 1.5 - 14$  mm, and  $B_{max} = 230$  mm
  - plain turning of cylinders and drums with  $d = 2,500$  mm and  $L = 10,000$  mm for diameters less than 2,000 mm,  $L = 14,000$  mm can be obtained
  - turnings, millings and broachings on vertical lathes for cylindrical parts with  $d = 8,000$  mm and  $L = 3,000$  mm
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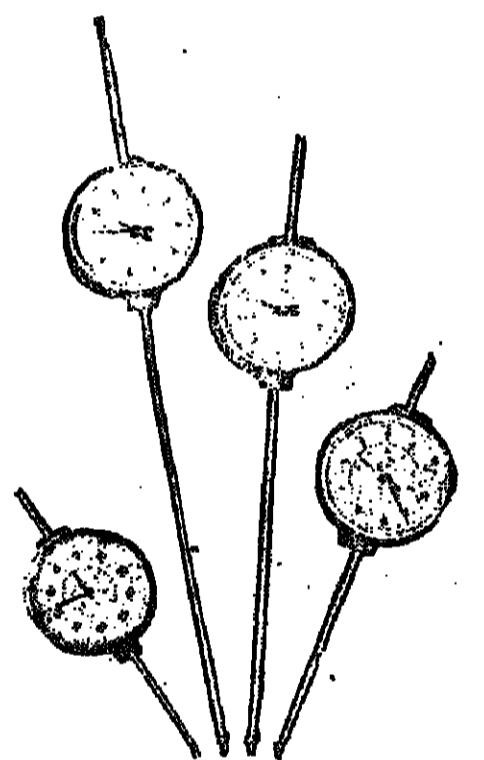
It is this efficiency (viz. quality, producti-

vity, competitiveness) that the Fine Mechanics Enterprise (IMF) of Bucharest has in mind when offering its beneficiaries :

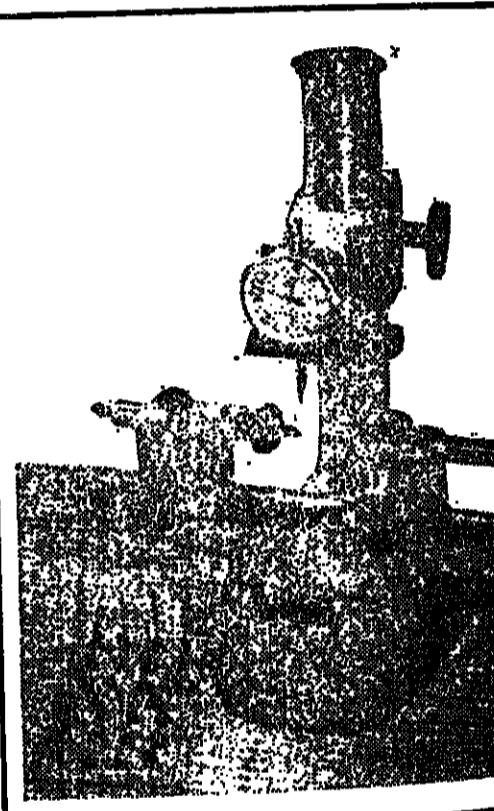
- measuring and control apparatus for lengths, pressures, temperatures, discharges, times and speeds ;
- special tools (diamond and sinter-carbide metal tools), holders, high-accuracy and fineness devices and dies, having a high degree of productivity and durability.



## MEASURING AND DIMENSIONAL CONTROL APPARATUS AND INSTRUMENTS

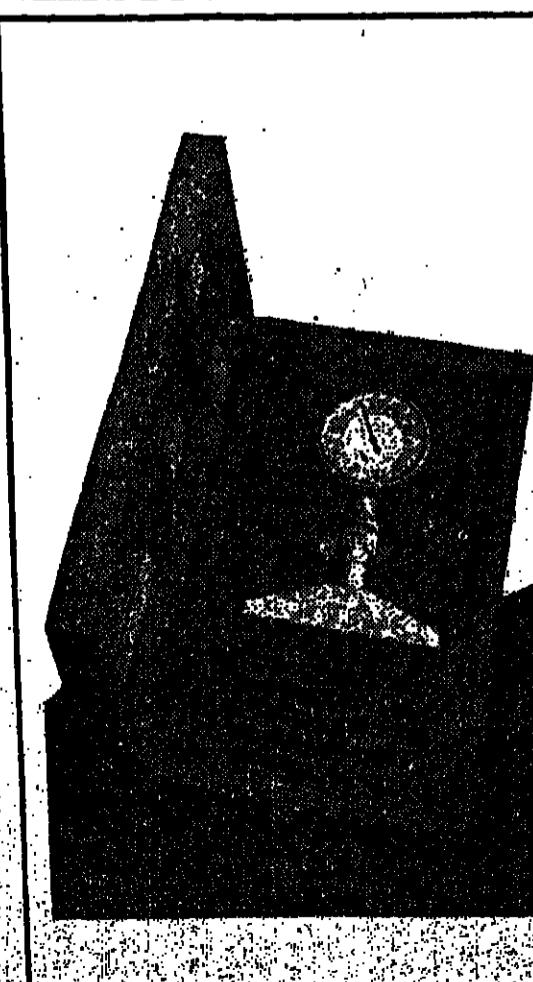


- dial gauges ● bore dial gauges ● gear measuring instruments ; ● threaded conic gauges for the oil industry.
- circular dial snap gauges ● gear pitch-error and gear-tooth-thickness measuring instruments ● reading ball-gauges ; optical read-out devices and rules.



## IN- AND POST-PROCESS SIZING GAUGES

- They are built according to modern principles, with pneumatic inductive, piezoelectric transducers, whose signals are processed and displayed analogically or numerically in modular-type electronic units :
- pneumatic post-process sizing gauge — SUPERJET ● pneumatic post-process sizing gauge — ELSUPERJET
- post-process sizing gauge with electric contacts ● inductive electronic post-process sizing gauge ● roughness measuring post-process sizing gauge ; smoothness measuring gauge (electronic levels).
- in-process sizing gauge for continuous exterior cylinder surfaces with one and two measuring points ; for continuous exterior surfaces and for continuous interior cylinder surfaces with two measuring points ● in-process sizing gauge for centreless grinding machines ● in-process sizing gauge for exterior diameters of narrow surfaces ● copying systems mounted on machine tools for processing through copying after a pattern.



## AUTOMATION ELEMENTS AND MECHANISMS

- Programmers ● electromechanical impulse counters ● programme control for automatic washing machines ● discharge counters with oval wheels ● electromechanical tachographs for motor vehicles ● complex speed measuring installations for locomotives and subways.

## FOR PRESSURE INDUSTRIAL CLOCK-TYPE APPARATUS, INSTALLATIONS AND TEMPERATURE CONTROL

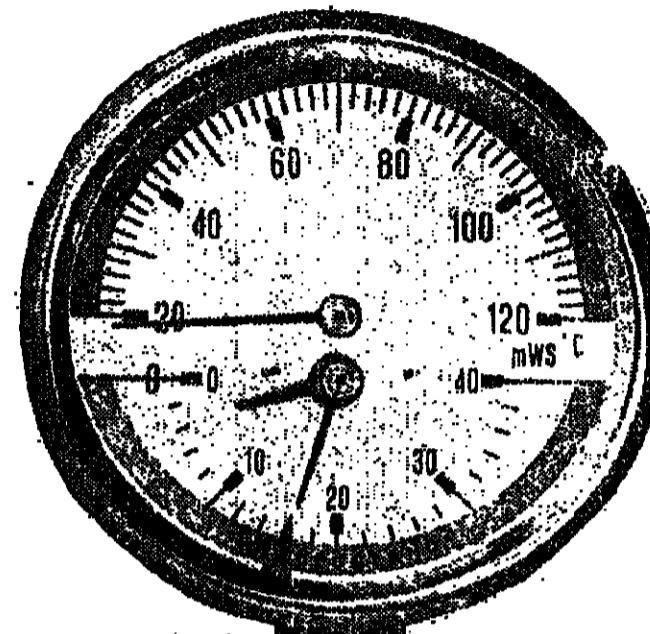
This apparatus family includes pressure switches and thermostats. They are indispensable in the automation of starting and stopping installations using fluids. The temperature and pressure must be maintained within certain preadjusted limits. Pressure switches and thermostats are made of the Fine Mechanics Enterprise in several varieties according to the freezers and types of motors they are mounted on, and the conditions of the environment.

## REMEMBER THE IMF TRADEMARK



### PRESSURE GAUGES

Through the great diversity resulting from constructive variants based on measuring limits, accuracy, diameter, connection and scale type, the Fine Mechanics Enterprise can satisfy the most exigent demands of its clients (standard pressure gauges or of special construction, upon demand). There are : ● general use industrial manometers ● vibration-proof manometers ● corrosion-proof manometers ● capsule-manometers ● double indication manometers ● manometers-thermometers.



## SINTER-CARBIDE METAL PRODUCTS

The main groups of products bearing the "CARMESIN" mark — which are the object of the Bucharest Fine Mechanics Enterprise's production programme — are the following : sinter-carbide metal brazable tips and inserts for metal cutting ; sinter-carbide metal inserts for mining tools ; sinter-carbide metal inserts specific to the wood industry, building materials and extraction industry ; products for drilling installations ; dies for screws and nuts ; dies for roll bearings ; other types of products upon the foreign partners' demand.

According to the concrete destination indicated by the end user, these products are executed out of the PKMG groups of carbide metal powder, after ISO international standards or according to other requirements specified in the order.

In order to increase the durability and performances of the sinter-carbide metal inserts, the method is applied of coating them with extra-hard layers of titanium carbide, giving the inserts an increased durability of up to 300 percent, as compared to the normal execution.



## DIAMOND TOOLS

The processing of ferrous and non-ferrous metals, of sinter-carbide metal, stone, concrete, ceramic and glass — through modern methods — calls for the use of diamond tools on an ever larger scale.

The manufacturing programme of this kind of tools is achieved at IMF on the basis of the licence purchased from WINTER firm of West Germany and is currently in full swing as a result of the growing demand. It comprises the following more important groups :

— diamond mills with metallic or resinous binder of various shapes and sizes, with cubic boron nitride.

— diamond tools for construction-material processing

— diamond tools with galvanic binder

— honing diamond blades

— diamond pastes

— diamond tools for trimming and shaping abrasive stones

— chambering tools with extra-hard materials from diamond polycrystals or cubic boron nitride

— diamond drawing dies.



## AND THE EXACT TIME

WHICH YOU CAN LEARN AT ANY MOMENT BY LOOKING AT THE DIAL OF THE WATCH WHOSE TRADEMARK OREX IS A GUARANTEE OF ACCURACY, BUILT IN SEVERAL HUNDRED MODELS BY IMF, THE WATCHES — MECHANIC OR QUARTZ-BASED ANALOG — MEET THE FINENESS OF YOUR AESTHETIC TASTE AND GIVE YOU THE EXACT TIME.



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# MINOLTA GREETS ROMANIA

MINOLTA's philosophy is to view copiers and the technical assistance granted to end users as a whole.

It is easy to expect the most of the inventiveness of the products of a big producer, but the fact that a customer takes it for granted that he benefits by the best technical assistance means much more to MINOLTA. This is the reason why copiers, laser printers, telefax and text systems come ever more frequently from MINOLTA!

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MINOLTA

## THE LEADING MEANS OF GOODS TRANSPORTATION

The railway is currently the main means of inland goods transportation. The material base of railway shipping has been continuously enriched with Diesel and electric locomotives and freight cars. Until 1990, the rolling stock is to grow by another 80 electric locomotives and 13,377 freight cars. Also pursued is the growth of the rolling stock usage indicators, the mechanization of loading-unloading operations, the expansion of containerization and transcontainerization, therefore the elimination of "warehouses on wheels", the growth of commercial speed, the full utilization of the railway transport capacity, the diversion of goods from road to railway shipping. Construction-assembly investment funds are directed towards ensuring new, more direct transportation ways, saving fuel, coal and raw materials. Consequently, the new railways for fuel coal conveyance will provide the most efficient link between coalfields and thermal power stations.

fraudulent bankruptcy in Russia. The Strassberg affair kept public opinion in eastern Europe under strain for one decade, between 1971-1980.

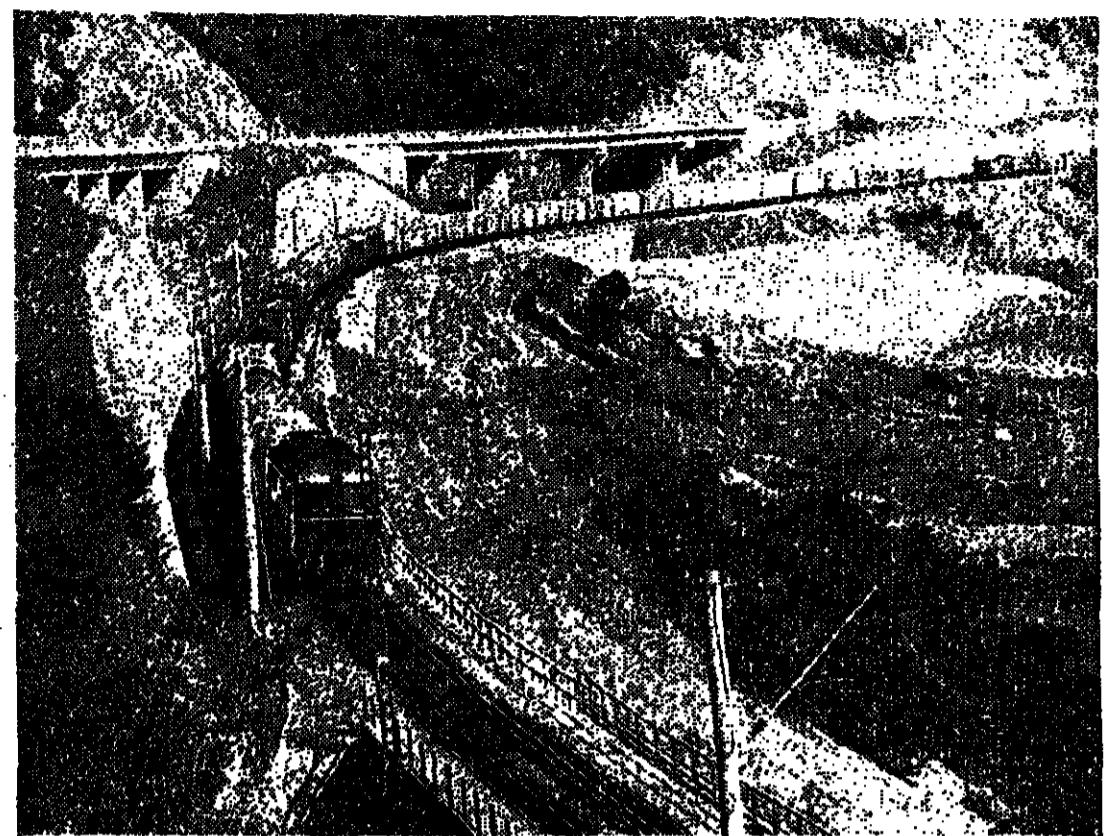
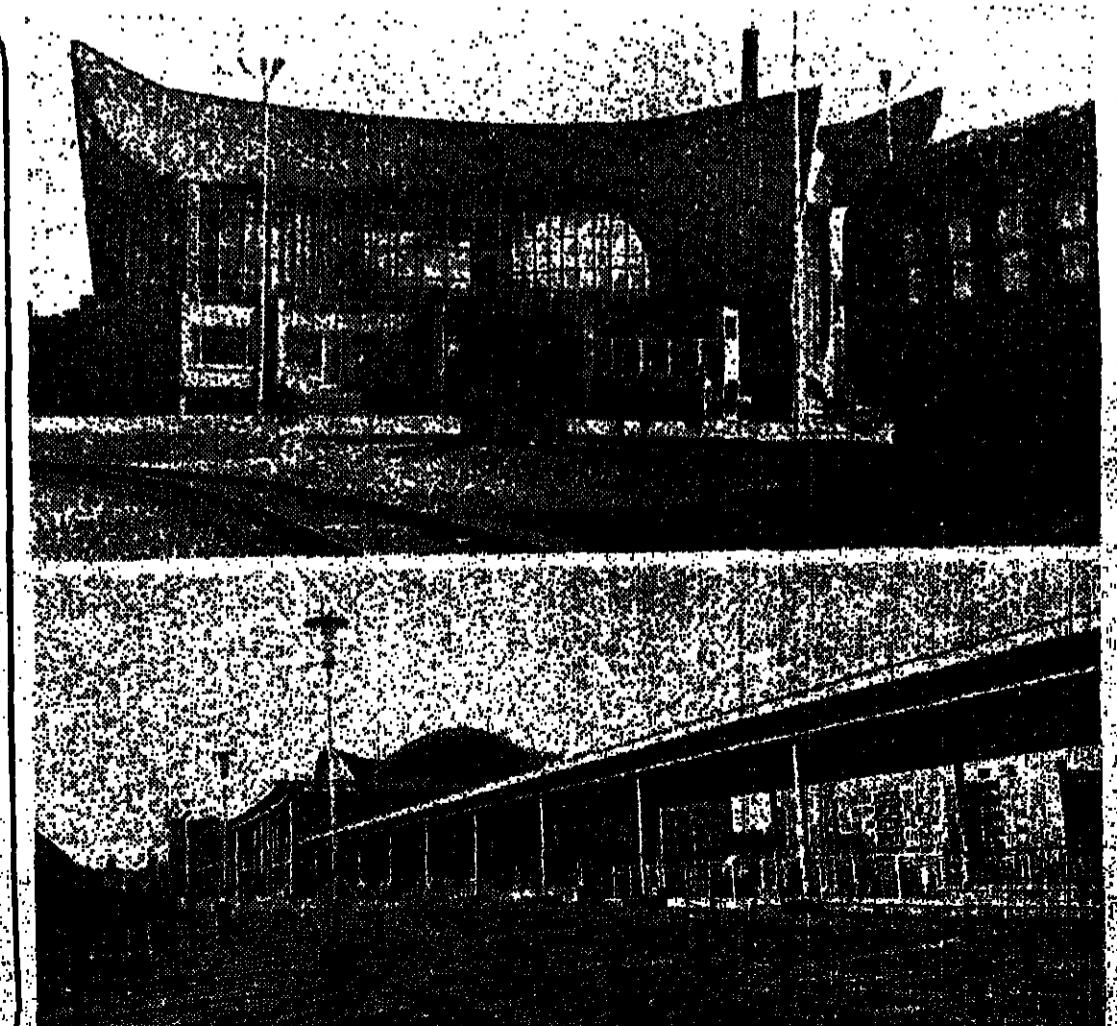
The episode was not unique in the construction of the railway network. Despite real efforts, the country's heritage of inappropriately built lines, badly chosen routes, works left uncompleted because of unfavourable circumstances, technical deficiencies or hostile natural elements, was large.

The progress made in Romania's material economic development of the last two decades has made it possible to achieve railway projects which had long seemed impossible, from a technological or investment point of view.

The inhabitants of the Mălăi Land did not have a railway connection with the rest of the country until 1978. Steel rails had started being laid out between Deva and Brad in 1939 but the project was soon abandoned, to be resumed in 1942

and then in 1960 when the Mința-Stoenica and Bard-Dealu Feil ends of line adding up to 200 km were built. 133 very difficult kilometers still had to be laid out. It was only in 1974, when, benefitting by mechanized installations and original technological solutions, builders boasting a rich experience gained on the country's great construction sites managed to lay the track in the hard rock of the mountains and the clay of the hills after nine years of work which involved more than one million cubic metres of earth were dug, hundreds of thousand cu.m. of concrete were poured, and tens of thousand tons of concrete and reinforced concrete prefabs were mounted, the 13.0 km still missing from the Deva-Brad railway finally soared into life and rounds the 280 km telon. On this project, 177 bridges, 10 viaducts and four tunnels were built. The hostility of nature seemed unanswerable, especially at km 22.380 where constructors could hardly

On page 8: Special wagons carry the export-bound Romanian cars (top), the last checks before leaving the depot (middle), a first class passenger wagon (bottom). On page 9: A railway edifice in Mehedinți county (top), a rack engine which conjures up old memories (middle), the railway stations of Tulcea and Constanța are remarkable by their modern architecture (bottom).



## THE "CIRCULATORY SYSTEM" OF THE NATIONAL ECONOMY

Transports play the role of a "circulatory system" in the country's economic and social life. Depending on the smooth running of conveyance means are the effective supply with raw and subsidiary materials of all economic units, the uninterrupted flow of products meant for the domestic market and for exports, the flow of material goods destined for the population's consumption. In the unitary national system of transportation, the railway holds the largest share, meeting most of the needs of freight and passenger transportation. Last year national transportation recorded a volume of 2,021.1 million tons of goods and about 65 billion passengers-km. Railway transportation has been developed and diversified in keeping with the growth of the national economy. The locomotives and cars currently in service secure a low consumption of fuel and energy and allow of applying the most complex systems of loading-unloading operations, being perfectly adjusted to combined transportation flows. Railway transportation currently the cheapest means of conveyance, accounting for a reduction in shipping expenses in the overall production material expenses and in the social product.

Further to be expanded is the containerized and transcontainerized transport.

The existing rolling stock will be added big-capacity cars and cars for transporting materials, semitrucks and finished products to the country's construction sites.

keep count of the measurements they had to take with the theodolite, as the ground was changing from day to day. Nature eventually yielded and for a year now two pairs of trains carrying passengers and two trains loaded with goods have been travelling the Deva-Brad route every day, linking the Mălăi Land to the country and fulfilling an old dream.

March 8 marked the completion of the structure works on the greatest railway art project in the country, on the line connecting Vlăsca - Rădușeni-Vilcea - the Topologul viaduct. On the "Sun's Railway", as builders call it (there are 10 viaducts, two large-scale bridges across the Argeș and the Olt, 325 roof-bridges, nearly 18,000 supporting walls) perfectly integrated with this railway, landscape is the highest (80 m above ground) and longest (1,350 m) viaduct in the country. Below, unsuspected by anyone, there are thousands of square metres of consolidations, earthworks, ditches, millions of cubic metres moved around. The wind surpasses by 14 metres per second the limit speed allowed for launching the last "prescribed" cargo train, weighing 280 tons.

The stages of railway construction, which would have been impossible in earlier days, had dramatically changed. The construction management, the approach to investment, technology, the most sophisticated installations, the most advanced management, the most progressive culture of management, the most advanced methods of controlling nature, just as ambitious and tenacious exports turning dreams into reality.

(con. on p. 10)





## 200 TYPES OF CABLES

Over 70 per cent of the output of insulated cables of the enterprise of electrotechnical products of Distrilja is bound for export. The quality of the composition and of the execution has imposed them on the markets of Czechoslovakia, West Germany, Yugoslavia, Bulgaria, People's China, Atlantic, Egypt, Iraq, Morocco, Sudan, Iran, etc.

Turned out in almost 200 types, the cables are mainly used in the construction of serial networks for the transportation of electric power. At the same time they are used in a series of mobile equipment (cars, trams and ships) and in distance-signalling installations.

C. MARIAN ■

## "MINICOMP" IN SCHOOLS

In the MINICOMP experiment, the well known computer circle for children, all first grade students of General School no. 17 in Bucharest were included last year. Two information circles with students of the 6th-7th grades were also created at the same school, the meetings of the circles being held weekly. Informatics lessons are taught by instructors of the MINICOMP collective and are an occasion to familiarize not only the school's students but also the teachers with electronic computers. The Scientific Research and Technological Engineering Institute (ICSTI-TCI) which coordinates the MINICOMP circle had the necessary equipment at the disposal of School no. 17.

M. MILENA ■

## WHEN OBSTETRICIANS GET TOGETHER

Between October 20 and 21 Satu Mare town hosted the proceedings of the national conference on obstetrics and gynaecology in Obstetrics. Staged by the Union of Medical Sciences Societies the meeting was attended by doctors from specialists and researchers from the main university centres of the Romanian school

of medicine (Bucharest, Timisoara, Cluj, Napoca, Iasi, Targu Mures, Craiova), as well as specialists from other cities, by scientific papers and discussion sessions. The meeting turned into a useful exchange of opinions and experience on the treatment of certain diseases with a high coefficient of recurrence.

M. MILENA ■

## LOGICAL GAMES

Did you know that games are governed by a science of their own? It is called ludology, now a subject to many doctoral papers. Games and toys are not made at random. Their creators aim at stimulating children's creative, creative, especially, independence of acting and thinking to develop their spirit of collectivity.

A real industry of games has been developed in Romania. The RECOOF advertising enterprise has released a large series of logical games under the rubric of JEGO (functional-collective games). A team of people specializing in logical games, designers of models, collaborating with a large number of black-and-white artists, mathematicians, psychologists, teaching and medical staff, proposed 678 titles of games. They scored a great success. Over 800,000 copies have been sold to pre-school children and students.

A new science which has revolutionized the 20th century — informatics — has laid its imprint on games, too. Intelligent games are beginning to take the place of traditional ones. Already known games, as well as other original forms of playing, are now part and parcel of software of computers which have turned into intelligent playing mates. Computer games can involve one's skillfulness, relying on reflexes, fast decisions, or the ability to drive cars or flying "apparatuses" to move along labyrinths with unexpected obstacles, adventures, etc. It seems that computers

have the tendency to make things increasingly hard for their human playing mates. Some specialists forecast that in the year 2000 only one per cent of personal computer possessors will manage to overpower computers in their favourite games.

RECOOF has proposed the Institute of Computer Technology and Informatics in Bucharest to jointly manufacture and sell cassette with games for personal computers of the same Simeon family. The first cassette of this kind has already been put on stands in the shops of RECOOF. It includes 11 games. In the near future the producers plan to achieve personal computers especially designed for games.

MILENA MIHAIESCU ■



## NEW PRODUCTS

The hydraulic tools and equipment enterprise of Fecor has manufactured tools, accessories for composite machine tools, processing units, highly-automated instruments. Photo: a new line of boring and cutting machines processing complex dies for hydraulic devices and installations.

As a matter of fact, new elements for the automation of technological processes and new methods of manufacturing hydraulic equipment are about to be assimilated in the enterprise, as a result of which its products will earn the end users' appreciation.

M. CONSTANTIN ■

## "CORSA" ON LAND

We are now passing through the Bosphorus strait. Then through the Gibraltar. We can also reach the English Channel. In front of us there is a radar equipment helping us find our position. But there are no sea waves hitting the ship because we are on land. Actually, it is a radar simulator for navigation at sea.

The images we have just seen are fragments from programmed lessons. A single programme can cover as much as 40 subjects, including also the difficulty of the exercise designed for training deck officers to decipher the radar, and

handle the ship in different situations and areas of navigation.

The sea navigation radar simulator called CORSA is a recent creation in a collective specializing in naval training by engineer Dragos Dumitrescu.

Trainees have at their disposal an anti-collision radar, a switchboard and a chart desk in order to pick up all necessary data, take the best manoeuvring decision and carry it out. The instructor has the possibility to supervise on a monitor the navigation zone by watching the navigation zone with all the ships existing in that area. Thus

being able to change the moving elements, with a view to setting up conflicting situations, according to the lesson's theme. The trainees' manoeuvres and errors are signalled on the display as soon as they are committed. Thus they can be analysed at the end of the lesson, or even immediately by interrupting it.

Designed jointly with the experts of the Computer Technology and Informatics Institute, the simulator has been ordered by the Sea-going Fleet Exploitation Enterprise (IEFD) Navrom in Constanta, Romania's largest port.

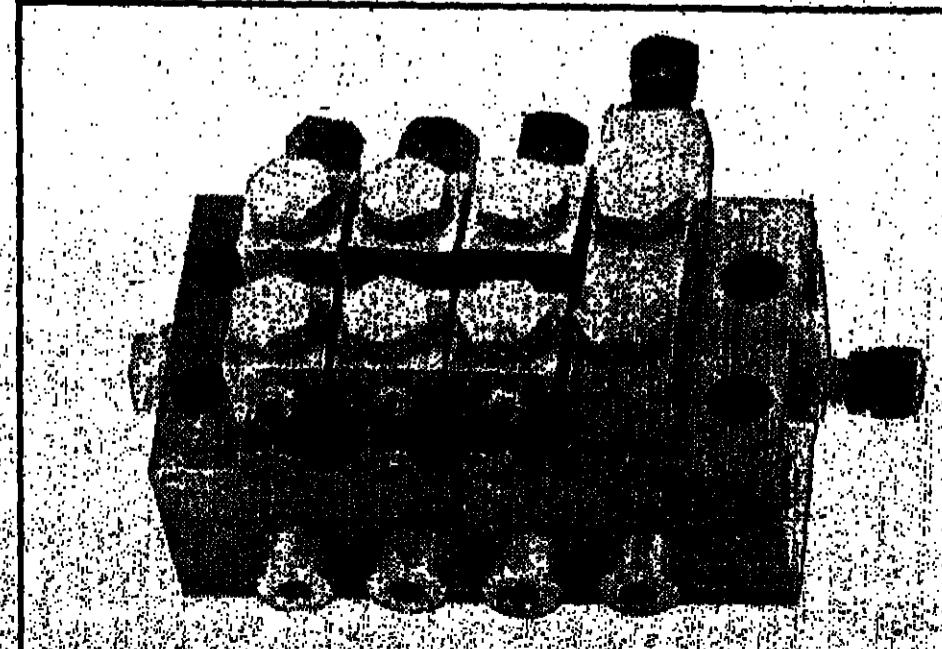
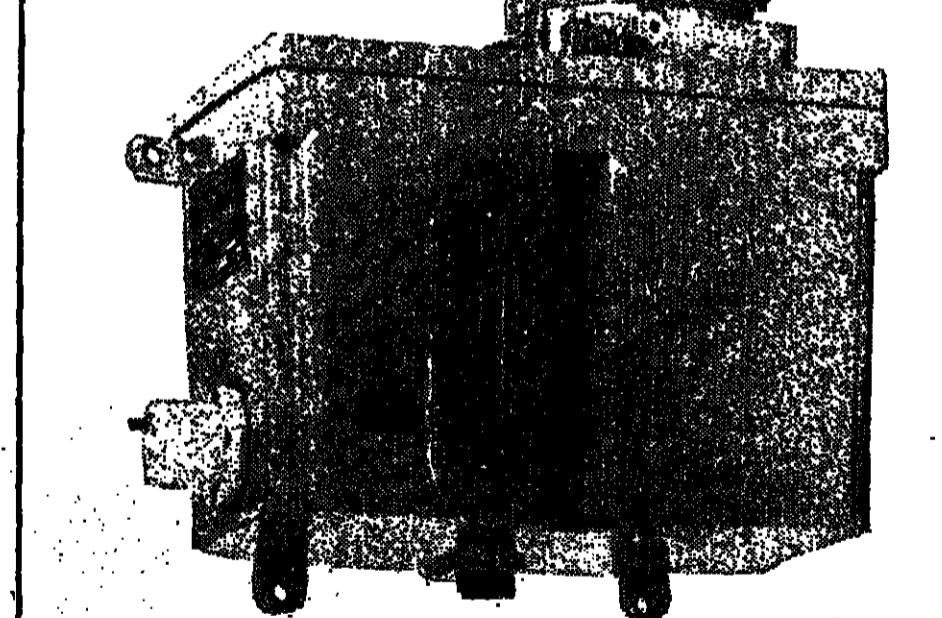
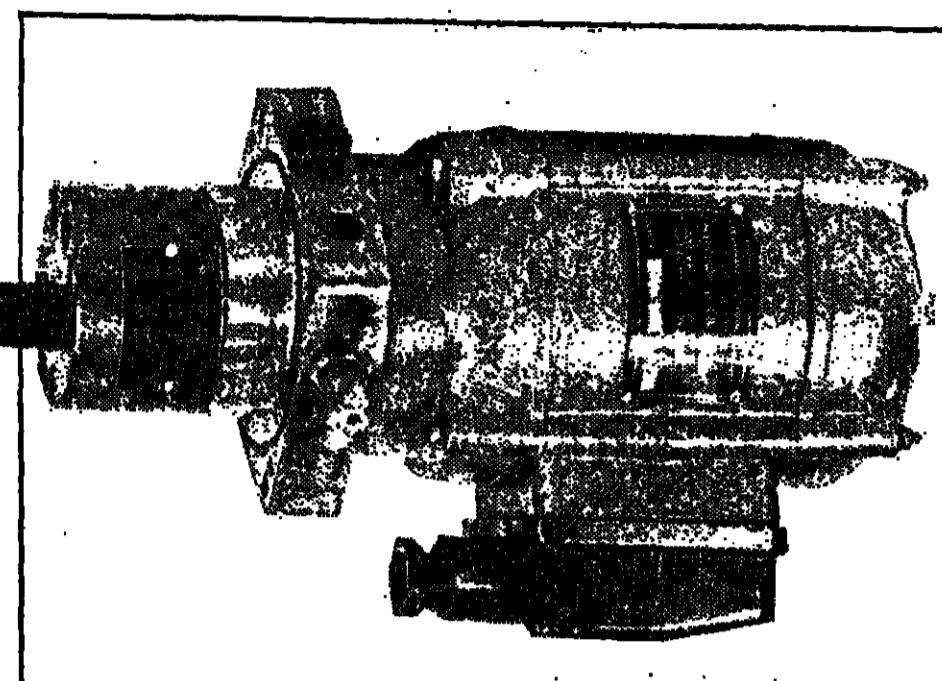
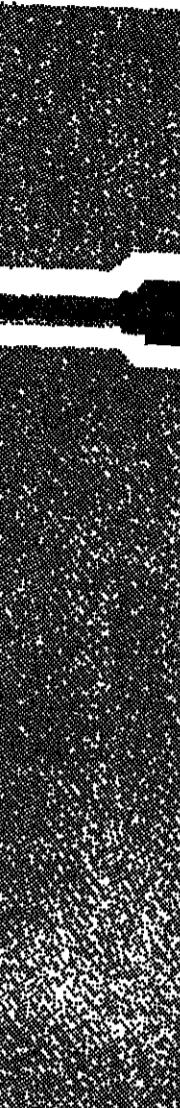
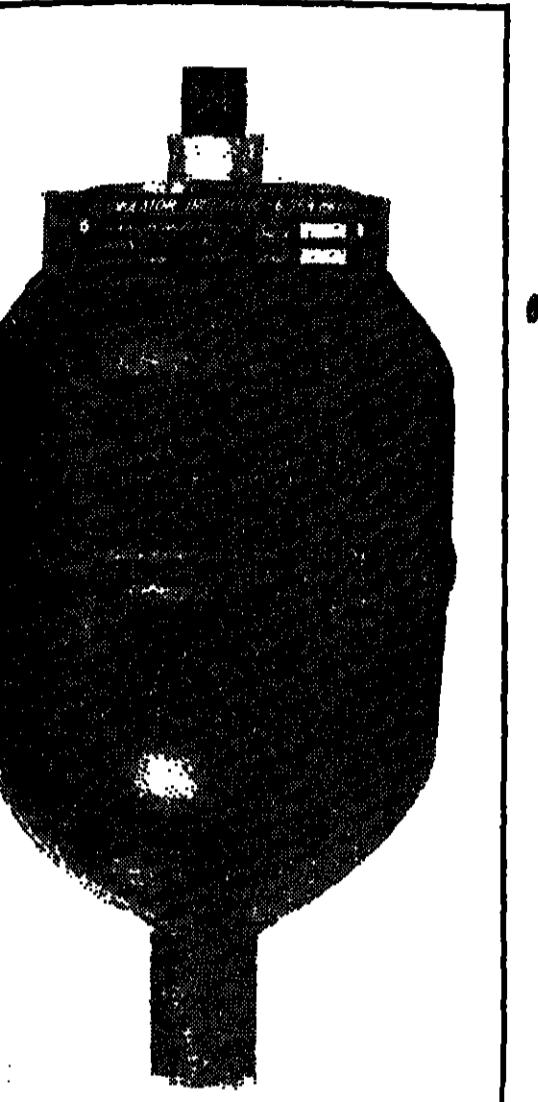
MARIAN COSTIN ■

## MOTORS FOR POWER STATIONS

The Enterprise of electric machines of Turm Măgurele manufactures, among others, new types of three-phased, asynchronous electric motors with short-circuited rotors, with powers ranging between 350 and 1,000 kW. According to priority programmes, these products are designed for power stations in the country. At the same time stipulated is the commissioning of new units offering the possibility of expanding the line of electric motors needed by the national economy.

## THE HYDRAULIC EQUIPMENT ENTERPRISE

IN RIMNICU VLICEA — ROMANIA MANUFACTURES A WIDE RANGE OF PRODUCTS AS FOLLOWS:



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### DIRECTIONAL CONTROL HYDRAULIC EQUIPMENT

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- minor cylinders
- collet chucks
- high pressure hand pumps
- vices

### FILTERING EQUIPMENT:

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- pressure filters
- return filters

### PNEUMOHYDRAULIC ACCUMULATORS AND ACCESSORIES

### HYDRAULIC CYLINDERS

### HYDRAULIC PUMPS

- progressive lubricators
- volume lubricators
- oil lubricating devices
- grease lubricating devices
- two-way lubricating devices
- resistances
- injectors
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### VARIOUS HYDRAULIC EQUIPMENT

The Hydraulic Equipment Enterprise in Rimnicu Vilcea offers technical assistance for the products ordered, upon request. Moreover, it can design new products, in keeping with the end users' needs.

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## EXPERTS AFFIRM THAT THE I.M.B. PHARMACEUTICAL PRODUCTS ARE RECOMMENDED FOR THE MOST DIVERSE THERAPIES BECAUSE OF THEIR INCONTESTABLE EFFICIENCY

The great achievements of our firm, the Bucharest Drug Enterprise (IMB), are due to a remarkable technico-scientific and productive potential consisting of scientific research sectors (which closely collaborate with specialized institutes in Romania), ultramodern laboratories and installations boasting great productivity and a high technological standard such as those for extraction and purification, electronically controlled technological flows and advanced, highly competitive methods. A steady activity in the field of drug production engineering and technology is carried on at IMB, which guarantees the superior qualities and therapeutic properties of the IMB drugs. As a result, the 620 pharmaceutical products made by our enterprise have thoroughly imposed themselves in the markets of over 50 countries among which England, Austria, Czechoslovakia, People's China, Denmark, Switzerland, Finland, West Germany, Italy, Japan, Poland, the USA, the USSR etc.

those who handle various installations.

PIRIVIN. The product is presented in phials containing 20 compressed tablets containing 100 mg pirinol (mellorates the use of glucose by the nervous cell), 10 mg vincamine (adapts regional blood flow and uses circulating oxygen in cerebral metabolic needs) and 25 mg pyridoxine hydrochloride (improved oxidation-reduction processes, being implicated in the metabo-

METRONIDAZOL 0.5 percent solution. It has two types A and B, both being presented in phials of 200 ml perfusion solution administered intravenously to adults and children (12 years old and over) through perfusion of 100 ml solution for 30-60 minutes at 6-8 hours interval. Type A contains 0.500 g metronidazole, 5.47250 g pharmaceutical glucose 0.02587 g sodium chloride, 0.2487 g hydrochloric acid 0.1 N and distilled water. Type B contains 0.500 metronidazole, 0.780 g sodium chloride and distilled water. Metronidazole is an excellent antibacterial drug recommended in serious infections owed to anaerobes, being very active against these bacteria with or without associating other germs. With an excellent tissue penetration, being absorbed at liver level, and the major resulting metabolite having an antibacterial and antiparasitic action, Metronidazole is indicated in the prevention of septicemia, cerebral abscess, osteomyelitis, necrotizing pneumonia, peritonitis or especially in the pre-surgical prophylaxis of patients with high infection risk with anaerobic germs. A cure lasts 7-10 days and only in special cases up to 14 days, the perfusion being replaced when possible, with the product's oral or rectal administration. In case of pre-surgical prophylaxis perfusions are made of 15 mg/kg body weight 30' to one hour before surgery and 7.5 mg/kg body weight for 30 to 60 minutes, 6-8 hours after surgery. Precautions are recommended in the posology of patients with renal or hepatic deficiencies.

WHICH ARE WIDELY SOLICITED ON THE WORLD MARKET

• GEROVITAL, ASLAVITAL (tablets, injectable ampoules), API-LARNIL, API-LARNIL-prop (tablets) - tonic and trophic • PELL-AMAR (injectable ampoules, ointment, gel, cream) - antirheumatic • SINERDOL EH (sugar-coated tablets) - antibiotic • RODILEMID (injectable ampoules) - antiherpetic anti-inflammatory • ULCOSILVANIL (compressed tablets) - antacid, antulcers.

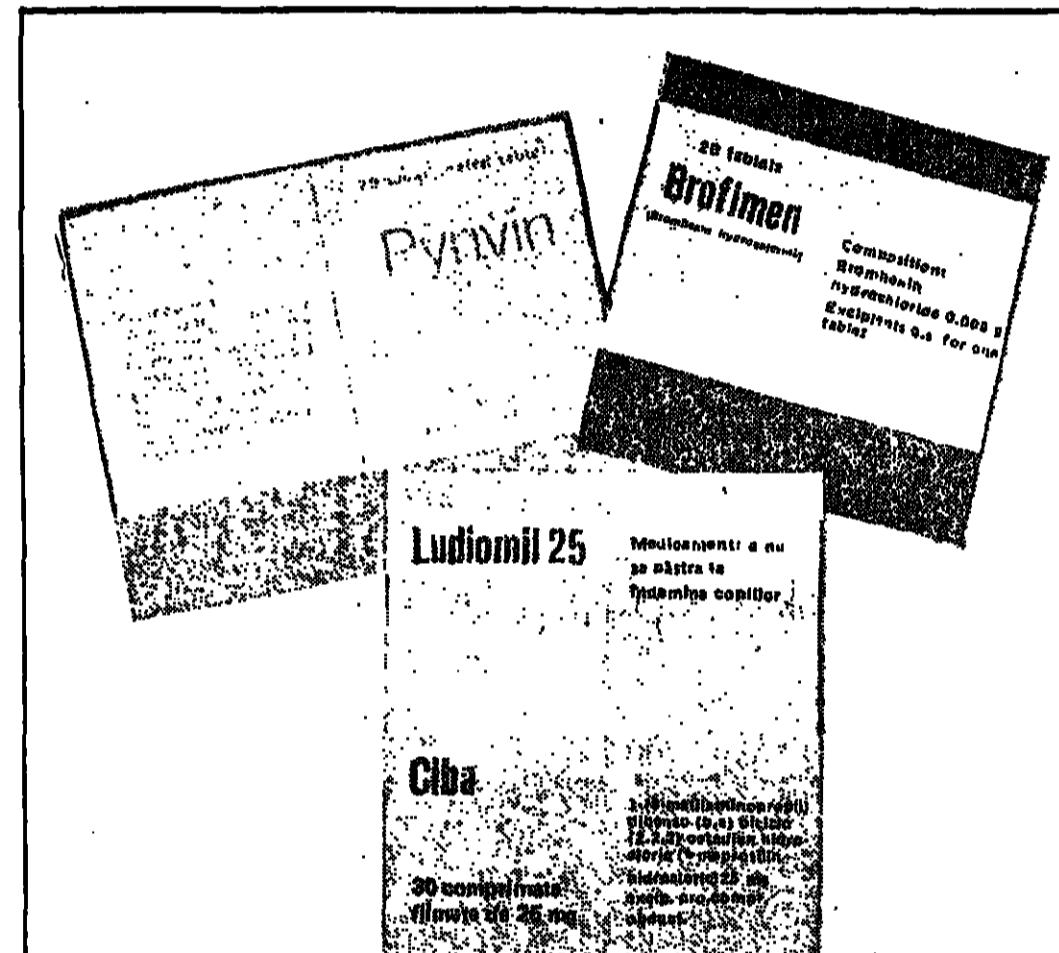
IMB's range of drugs of organic synthesis and of conventional products - from tablets and gelatinous coated tablets to plasma substitutes and veterinary products - is too wide for us to be able to present them at large. However we shall mention:

• ANTIMICROBIAL AND ANTIPARASITICAL MEDICATION: antimicrobial antibiotic and chemotherapeutic products, tubercular, antiviral, antiamoebic, antihelminthic, antiseptic, disinfectant products; • MEDICATION OF NEOPLASTIC DISEASES (cytostatic and hormonocytostatic); • MEDICATION OF THE CARDIO-VASCULAR SYSTEM: cardiotonic, antiarrhythmic products; • METABOLIC: water-soluble vitamins; anabolizers tonic, trophic solutions for infusion; • MEDICATION FOR THE CENTRAL NERVOUS SYSTEM: hypnotic drugs, sedatives, neuroleptic drugs, tranquilizers, antidepressants, analgesics, antipyretics, central excitants; • MEDICATION OF THE AUTONOMIC SYSTEM: sympathomimetic drugs, parasympathomimetic drugs; parasympatholytic and spasmolytic drugs; • ANTI-RHEUMATIC AND ANTI-MALARIA DRUGS: produced through synthesis; • ANTI-ALLERGIC AND ANTI-HISTAMINIC DRUGS.

IMB's great scientific and technico-productive potential helps it to cooperate with specialist firms guaranteeing the fulfilment of its obligation in irreproachable conditions, in the context of obtaining mutually advantageous results. An eloquent plea for this assertion is IMB's cooperation with many famous firms, such as CIBA-GEIGY (Switzerland); Ludomil • SANDOZ (Switzerland); Torecan, Tavegyl • BAYER (West Germany); Trasylol • ROGER BELLON (France); Collimycin • PHIZER Inc. New York (USA); Fa-

sign.

REMEMBER:  
THE IMB PRODUCTS MEET THE WORLD'S LATEST DEMANDS IN THE FIELD OF THERAPY AND PROPHYLAXIS OF VARIOUS DISEASES.



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LUDOMIL. It comes in bottles containing 20 compressed tablets of 75 mg or 25 mg ludomil hydrochloride each, respectively. The preparation is an antidepressant which efficiently combats anxiety, irritability, agitation, psychomotor inhibition, psychosomatic and somatic disorders, as well as the disorders accompanying psychic depressive states in children and adolescents (periodical, cyclic, torpid, organic exhaustion, symptomatic etc.), apathy (especially with elder people).

lism of proteins, lipides and glucides). Pirinol is a neurotonic indicated to sportsmen, increasing their resistance during physical and psychic strain in training and competitions, for students during exams, the medicine having stimulating effects on attention and power of concentration and in general in cases of memory disorders and emotional instability. Other pharmacotherapeutic applications: states of asthenia, convalescence after diseases especially with children (flu, measles, whooping cough, etc.) in neuropsychic deficiencies with children; in cases of cerebral atherosclerosis, in some hearing troubles.

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